

MAGNETIC NAVIGATION SYSTEM AND MAGNET SYSTEM THEREFOR

ABSTRACT OF THE DISCLOSURE

A magnetic navigation system for orienting a magnetically responsive medical device in a selected direction within an operating region in a subject's body. The system includes a support for supporting the subject, a magnet system a magnetic field to the operating region, and an imaging system. The magnet system includes at least two magnets disposed on opposite sides of the operating region for applying a magnetic field of at least 0.08 Tesla in any selected direction in the operating region by a change of the position and/or orientation of the magnets within an exclusion zone volume. The imaging system includes an imaging beam source and an imaging beam detector disposed on opposite sides of the operating region. The source and the detector being carried on a C-arm which can pivot about an axis generally parallel to the longitudinal axis of the subject to change the imaging angle. The magnets of the magnet system being configured and positioned so that the C-arm can pivot through at least about 60° without impinging upon the exclusion zone of the magnets.